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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/955,095	09/19/2001	Hiroshi Koyama	P281124 U3-9613-B	9734
27572	7590	02/27/2004	EXAMINER	
HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 828 BLOOMFIELD HILLS, MI 48303			DAVIS, ROBERT B	
			ART UNIT	PAPER NUMBER

1722

DATE MAILED: 02/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/955,095

Applicant(s)

KOYAMA ET AL.

Examiner

Robert B. Davis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9 and 11-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9 and 11-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Response to Amendment

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 9, 11, 12 and 14-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Sharp (UK specification 1,382,583: figures 1-10; page 1, lines 25-49 and 68-90; page 2, lines 21-26, 48-62 and 69-71; page 3, lines 44-61 and 117-128, and page 4, line 106 to page 5, line 8).

Sharp teaches an apparatus for encapsulating an insert comprising: a die set (16, 20) which defines a molding cavity, hold members (27) for releasably holding an insert (37) within the mold cavity for properly positioning the insert in relation to the mold cavity surfaces, means for injecting molten resin into the cavity (page 3, lines 101-103), means for separating the hold member from the insert (sliders 29 which move the holders from the insert holding position to the retracted position wherein the holders are flush with the mold cavity, see page 2, line 124 to page 3, line 22), means for heating a surface of the hold member to a temperature higher than a temperature of an inner surface of the die set which is electrical heater (74). The reference also teaches forming the holding members (27) with a ceramic tip (41) that insulates the pin from the molding resin (see page 3, lines 44-61). The reference further teaches water passages (16a and 20a) for the passage of cooling water to cool the molten plastic injected into

the mold cavity. The reference further teaches means for stopping the supply of electricity to the heaters in the holding members upon retraction of the holding members that constitutes a controller for controlling the cooling of the mold.

In regards to claim 1 as amended, the language "the heating means being activated simultaneously with or after the injecting means injects the molten resin into the cavity" is intended use. The reference clearly states that a limit switch turns off the heating means after retraction of the holding pins. Therefore it is inherent that the heating means is turned on during a subsequent molding operation. As such, the heating means is capable of being turned on. It is suggested that applicant positively claims a controller that turns the heating means on simultaneous with or after the injection means injects molten resin into the cavity.

In regards to claim 17 as amended, please note figures 3-5, the reference teaches that a skin layer (42) is formed in the mold except for the portions of the insulated or electrically heated pins. Figure 4 displays the region (46) vacated by the withdrawn pins and Figure 5 illustrates the formation of a skin layer (47) adjacent the withdrawn pins. It is clear from this series of illustrations that the remainder of the mold cavity is cooled sufficient to harden the resin in the first region before the resin in the second region is cooled. Such a limitation is nevertheless intended use and does not carry patentable weight, but as this language was added to the claim, the reference has been further described to show such functional language in the prior art process, which illustrates that the prior art device is capable of such function.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sharp taken together with Westover (5,004,893: column 2, lines 50-68 and column 7, lines 40-59).

Sharp discloses all claimed features except for the heater being made of a conductive ceramic.

Westover discloses an electric heater having an outer insulating ceramic and an inner conductive ceramic which provides an improvement over conventional heaters because the heater does not require sophisticated clips or terminals to withstand high temperatures and the heater is rugged and reliable.

It would have been obvious at the time of the invention to one of ordinary skill in the art to modify the apparatus of Sharp by using a ceramic heater having a conductive ceramic as disclosed by Westover because the use of a two component ceramic heater provides a rugged and reliable heating device which does not require sophisticated clips or terminals.

Response to Arguments

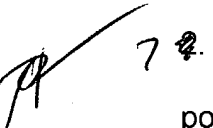
RP 6 A. Applicant's arguments with respect to claims 9 and 11-18 have been considered but are not deemed persuasive. Applicant argues that the reference does not disclose the heating means being turned on or after injection of the resin into the mold cavity. The examiner acknowledges this, but states that the applicant has only added intended use language into claim 1. The examiner has proposed for applicant to positively recite a control means that activates the heating means simultaneous with or after injection of resin into the cavity. The heating means of the retractable holding pins of Sharp are turned off after retraction and thus the apparatus must have a means to turn the heating means on in a subsequent molding cycle.

In regards to claim 17, Sharp clearly shows in reference to figures 3-5 that the skin layer (42) is formed on the parts of the article before withdrawal of the holding members and thus clearly teaches not only the structure, but also the amended intended use functionality of the apparatus.

It is noted that applicant discusses only the Sharp heater in the form of heating oil. The examiner would just like to point out that the reference also discloses electrical

heating of the pins and that such referral to the heating oil is completely irrelevant to the issues at hand.

Conclusion

 **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

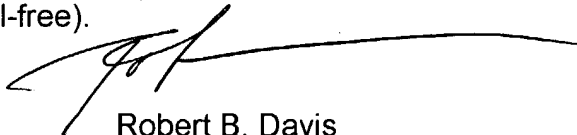
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert B. Davis whose telephone number is 571-272-1129. The examiner can normally be reached on Monday-Friday 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L. Walker can be reached on 571-272-1151. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Robert B. Davis
Primary Examiner
Art Unit 1722

2/23/09